

# ABSTRACT

The present invention provides a back illuminated photodetector having a sufficiently small package as well as being capable of suppressing the scattering of to-be-detected light. A back illuminated photodiode 1 comprises an N-type semiconductor substrate 10, a P<sup>+</sup>-type doped semiconductor region 11, a recessed portion 12, and a coating layer 13. In the surface layer on the upper surface S1 side of the N-type semiconductor substrate 10 is formed the P<sup>+</sup>-type doped semiconductor region 11. In the rear surface S2 of the N-type semiconductor substrate 10 and in an area opposite the P<sup>+</sup>-type doped semiconductor region 11 is formed the recessed portion 12 that functions as an incident part for to-be-detected light. Also, on the rear surface S2 is provided the coating layer 13 for transmitting to-be-detected light that is made incident into the recessed portion 12. The coating layer 13 is here arranged in such a manner that the portion provided on the recessed portion 12 is sunk lower than the portion provided on the outer edge portion 14 of the recessed portion 12.